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10/733,516	12/12/2003	Brian Ruggiero	34090-06297	9084

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EXAMINER

ESHETE, ZELALEM

ART UNIT	PAPER NUMBER
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3748

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Please find below and/or attached an Office communication concerning this application or proceeding.



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**BEFORE THE BOARD OF PATENT APPEALS
AND INTERFERENCES**

Application Number: 10/733,516
Filing Date: December 12, 2003
Appellant(s): RUGGIERO, BRIAN

MAILED

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Group 3700

David R. Yohannan
For Appellant

EXAMINER'S ANSWER

This is in response to the appeal brief filed 08/31/2006 appealing from the Office
action mailed 02/21/2006.

(1) Real Party in Interest

A statement identifying by name the real party in interest is contained in the brief.

(2) Related Appeals and Interferences

The examiner is not aware of any related appeals, interferences, or judicial proceedings which will directly affect or be directly affected by or have a bearing on the Board's decision in the pending appeal.

(3) Status of Claims

The statement of the status of claims contained in the brief is correct.

(4) Status of Amendments After Final

The appellant's statement of the status of amendments after final rejection contained in the brief is correct.

(5) Summary of Claimed Subject Matter

The summary of claimed subject matter contained in the brief is correct.

(6) Grounds of Rejection to be Reviewed on Appeal

The appellant's statement of the grounds of rejection to be reviewed on appeal is correct.

The copy of the appealed claims contained in the Appendix to the brief is correct.

(8) Evidence Relied Upon

6,112,710	Egan	09-2000
6,386,160	Meneely	05-2002
6,412,457	Vorih	07-2002
5,619,965	Cosma	04-1997
6,474,277	Vanderpoel	11-2002
4,153,016	Hausknecht	05-1979

(9) Grounds of Rejection

The following ground(s) of rejection are applicable to the appealed claims:

1. Claims 1,3,5-7,20-22,29 are rejected under 35 U.S.C. 103(a) as being unpatentable over Egan, III et al. (6,112,710) in view of Meneely et al. (6,386,160).

Regarding claim 1: Egan discloses a system for actuating two engine valves each having an axial center spaced a first distance from each other (see figure 3), said system comprising: housing (see numeral 31) having a first slave piston bore (see numeral 34), a second slave piston bore (see numeral 34), and a passage adapted to provide hydraulic fluid to the first and second slave piston bores (see numeral 33; column 6, lines 47 to 50); a first slave piston slidably disposed in the first slave piston

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bore and a second slave piston slidably disposed in the second slave piston bore (see figure 3), said first and second slave pistons each having an axial center spaced a second distance from each other (see figure 3), a master piston operatively connected to the housing passage (see numeral 32); and a hydraulic fluid control valve operatively connected to the housing passage (see numeral 35).

Egan fails to disclose a valve bridge disposed between the first and second slave pistons and the two engine valves; wherein the first distance is different than the second distance.

However, Meneely teaches a valve bridge disposed between the first and second slave pistons and the two engine valves; wherein the first distance is different than the second distance (see figures 1,10). Meneely also teaches apparatus which is rugged and economical in construction and reliable during operation (see column 1, lines 64 to 67).

It would have been obvious to one having ordinary skill in the art at the time the invention was made to modify Egan's device by providing a valve bridge arrangement as taught by Meneely in order to achieve rugged, economical apparatus that is also reliable during operation as taught by Meneely.

Regarding claim 3: Egan discloses a valve seating device disposed in the housing passage (see figure 2).

Regarding claim 5: Egan discloses the valve seating device is disposed substantially directly above the first slave piston (see figure 2).

Regarding claim 6: Meneely discloses the second slave piston has a greater mass than the first slave piston; in that the two pistons are not identical as shown in the figure (see figure 10).

Regarding claim 7: Egan discloses at least one slave piston is solid throughout (see figure 3).

Regarding claim 7: Meneely discloses at least one slave piston is solid throughout (see figures 1, 10).

Regarding claim 20: Meneely discloses the first and second slave pistons are disposed above the valve bridge at central locations relative to the locations at which the valve bridge contacts the first and second engine valves (see figure 1).

Regarding claim 21: Meneely discloses the valve actuation system is a variable valve actuation system (see abstract).

Regarding claim 22: Egan discloses the valve actuation system that is capable of fixed timing valve actuation system (see figure 3).

Regarding claim 29: Meneely discloses the first distance is greater than the second distance (see figure 10).

2. Claims 7,28 are rejected under 35 U.S.C. 103(a) as being unpatentable over Egan, III et al. (6,112,710) in view of Meneely et al. (6,386,160) as applied to claim 3 above; and and further in view of Vorih (6,412,457).

Egan as modified above discloses the claimed invention as recited above; and further shows at least one slave piston is solid throughout in the figure (see figure 3).

Egan fails to specifically disclose at least one slave piston is solid throughout by giving 3D or sectioned figures; and the seating device is integrated into the first slave piston.

However, Vorih teaches that it is conventional in the art to utilize at least one piston is solid throughout (see figure 21; column 13, lines 10,11); the valve seating device is integrated into the piston (see figure 10, numerals 260, 261).

It would have been obvious to one having ordinary skill in the art at the time the invention was made to modify the device of Egan by providing the arrangement as taught by Vorih in order to simplify manufacturing assembly through integration of parts.

3. Claim 30 is rejected under 35 U.S.C. 103(a) as being unpatentable over Egan, III et al. (6,112,710) in view of Meneely et al. (6,386,160) as applied to claim 1 above; and further in view of Hausknecht (4,153,016).

Egan as modified above discloses the claimed invention as recited above; however, fails to disclose the master piston is oriented substantially perpendicular to the first and second slave pistons.

However, Hausknecht teaches the perpendicular arrangement of the two pistons to accommodate the position of the input device (see figure 5, numerals 153,136).

It would have been obvious to one having ordinary skill in the art at the time the invention was made to modify the device of Egan as modified above by providing perpendicular arrangement as taught by Hausknecht in order to accommodate the position of a horizontal input device as taught by Hausknecht.

4. Claim 4 is objected to as being dependent upon a rejected base claim, but would be allowable if rewritten in independent form including all of the limitations of the base claim and any intervening claims.

5. Claim 23 is allowed.

(10) Response to Arguments

In response to appellant's argument that there is no motivation to combine the references, the examiner affirms the position that such motivation is found in the references themselves. Meneely provides such motivation; for example, "ensure rugged and economical in construction and reliable during operation" (see column 1: 64 to 67).

Case in point is found by taking a look at figures 1 and 10 of Meneely. As a result of the bridge, the point of applications of the "slave pistons" can be varied and reconfigured based on the design requirements. The primary reference provides no such bridge and thereby limit one to fixed points of action for the slave pistons. Therefore, it would have been obvious to one of ordinary skill in the art to combine the references as recited above in order to reduce cost of construction and improve reliability during operation as taught by Meneely.

In response to appellant's arguments against the references individually, one cannot show nonobviousness by attacking references individually where the rejections are based on combinations of references. See *In re Keller*, 642 F.2d 413, 208 USPQ 871 (CCPA 1981); *In re Merck & Co.*, 800 F.2d 1091, 231 USPQ 375 (Fed. Cir. 1986).

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In this instance, the primary reference discloses the claimed invention (including master and slave pistons) as recited above except for a "bridge" and its configuration. The secondary reference is relied only to correct this deficiency as discussed above.

In response to appellant's argument that the slave pistons are not of different masses, Meneely shows that the two "slave" or actuating pistons can have different sizes as shown by figure 10.

For the above reasons, it is believed that the rejections should be sustained.

(11) Related Proceeding(s) Appendix

No decision rendered by a court or the Board is identified by the examiner in the Related Appeals and Interferences section of this examiner's answer.

Respectfully submitted,

Zelalem Eshete

Examiner

A handwritten signature in black ink, appearing to read 'Zelalem Eshete', written in a cursive style.

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November 6, 2006

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